Aerohive
The Best ROI in Wi-Fi

PRODUCT SPECIFICATIONS SHEET

HiveAP 100 Series

802.11n access points

The Aerohive HiveAP 100 Series is a family of high performing and highly reliable 802.11n access points (APs). The HiveAP 100 series combines an enterprise-class access point with cooperative control technology to provide the benefits of a controller-based wireless LAN solution, without requiring a controller or an overlay network. HiveAPs are organized into groups, or "hives", enabling functions like fast L2/L3 roaming, coordinated RF management, security, QoS, and mesh networking.

The Aerohive Networks HiveAP 100 series access points, which includes the HiveAP 120 and HiveAP 110, provide high performance 802.11n (2x2) MIMO as well as a 10/100/1000 Ethernet port. The HiveAP 120 delivers an aggregate data rate of 600Mbps with dual radios, while the HiveAP 110 delivers a data rate of 300Mbps with a single dual-band radio.

The HiveAP 120 is a cost-effective, enterprise-grade solution, ideal for education, healthcare and distributed enterprise environments. With two radios and the ability to provide service concurrently on both 2.4Ghz and 5Ghz bands, the HiveAP 120 provides top performance at a low price point. The HiveAP 120 provides both mesh and access for 802.11a, b, g and n clients, with Aerohive's unique and resilient cooperative control architecture.

The HiveAP 110 is ideal for deployments where a single radio 802.11a/b/g/n solution is sufficient, such as small retail environments, telecommuters and micro branches. Single radio APs can also be effective in low capacity environments where the benefits of a second radio are small because there are few clients vying for airtime. A prime example of this is would be hospitality environments where an AP covers only a few rooms. The HiveAP 110 can operate in either band - 2.4Ghz or 5GHz - providing the opportunity to use the less congested 5GHz band if the clients are all 5GHz capable.

Key Software Features & Benefits

SLA Compliance Monitoring and Response

The SLA compliance solution for the HiveAP 100 series brings determinism and visibility into the wireless network. It enables IT administrators to establish, monitor, and deliver throughput service levels for Wi-Fi clients. Different performance SLAs may be established for each class of Wi-Fi client, and the system automatically responds if they are not being met. The solution also dramatically simplifies client performance analysis, isolating problems before users complain and providing rich statistical information on each client and access point.

Wireless VPN

The wireless VPN functionality enables the HiveAP 100 series products to act as a VPN endpoint to provide secure wireless connectivity to branch offices and telecommuters. Aerohive's wireless VPN is a Layer 2 IPSec solution that is far easier to configure, deploy, and manage than competing solutions. The flexible solution maintains complete HiveAP functionality across the network.

Increased Network Capacity with Airtime Management

Aerohive's Dynamic Airtime Scheduling feature enables faster clients, like 802.11n laptops, to get equal access to the airtime rather than allowing legacy or slow clients to monopolize the airtime. In addition, Dynamic Airtime Scheduling can also track retries and manage upstream traffic to protect the network from misbehaving clients or users. Overall, Dynamic Airtime Scheduling can increase network capacity by up to 10x just by keeping slow or legacy clients from dominating the airtime.

FLEXIBLE HARDWARE DESIGN
- Multiple radios provide concurrent 802.11a/n and 802.11b/g/n connections (HiveAP 120 only)
  - — Allow greater flexibility in deployments
  - — Support legacy 802.11b/g and 802.11n at the same time with no degradation in performance
  - — Allow automatic mesh backup or dedicated mesh backup based on customers needs
- Flexible environment support allows the ability to deploy a 100 series AP in a variety of environments
  - — HiveAP 100 series are Plenum Rated APs designed for indoor, office environments.
- Supports 802.3af PoE or a standard power adapter

INNOVATIVE DESIGN
- Designed to blend well into an office environment
- Supports flexible deployments in a variety of environments
- Low distraction indicators appear as gently glowing colors rather than bright blinking lights, keeping employees from being distracted while clearly providing status to IT personnel

COOPERATIVE CONTROL
- Cooperative fast L2/L3 roaming
- Cooperative RF control
- Aerohive Mobility Routing Protocol (AMRP) for mesh routing
- Tunnel load balancing for L3 roaming

WIRELESS VPN
- Remote office IPSec-based VPN solution
- Profile-based Split Tunneling with NAT support
- Supported across mesh
- RADIUS, DHCP, NTLM, LDAP and NTP can selectively go to local or remote network

SLA COMPLIANCE
- Performance Sentinel – Monitor and automatically trigger actions to resolve limited throughput in the wireless network
- Airtime Boost – Automatically trigger a greater airtime allocation based upon failure of a client to hit a threshold

SECURITY
- Tursted Platform Module (TPM) – Hardware-based key storage and encryption
- Wireless privacy and authentication 802.11i, WPA, WPA2, WEP, 802.1X, PSK,Wi-Fi Alliance Certified
- Granular user profile-based management defines VLANs, QoS, mobility policies, and security policies for each user that enters the network
- Encryption: AES, TKIP or RC4 (WEP only)
- Time-of-day and day-of-week access control and SSID enablement
- Up to 16 SSIDs per radio for network segmentation
- On-board stateful-inspection firewall policy enforcement with session state sync with neighbors
- ALG support for SIP, DNS, TFTP, and FTP
- Destination-based MAC firewall support
- Tunneled guest networks
- Hive-wide client isolation
- WPA-TKIP Vulnerability Protection

AUTHENTICATION
- 802.1X authentication for WEP, WPA, and WPA2
- Private PSK authentication allows for unique preshared keys (PSK) for each user within a single SSID
- RADIUS support with PEAP, EAP-TLS, TTLS, LEAP, and EAP-FAST
- LDAP authentication to directory servers, including OpenLDAP and Novell eDirectory
- Authentication to Microsoft® Active Directory™ with local credentials caching, also supports Global Catalog and multiple forests
- Multiple RADIUS server support (per AP, per SSID)
- Built-in RADIUS server
- MAC-based RADIUS authentication
- Dynamic Change of Authorization (RFC3576)
- 100 associated clients per radio

CAPTIVE WEB PORTAL
- Built-in customizable captive web portal on HiveAPs for guest access
- External Captive Web Portal Support and Walled Garden allows for easy integration with 3rd party Captive Web Portal solutions
- RADIUS support for captive web portal
- Microsoft Active Directory authentication for captive web portal

QoS FOR VOICE, VIDEO, & DATA AT THE RADIO
- Powerful QoS features usually only found on high-end routers
- Stateful VoIP roaming and failover
- User profile-based queuing, scheduling and policing
- QoS assignment per VLAN, user profile, service, and MAC address
- Protocol decoding and dynamic port detection for SIP calls
- Full queuing support with 8 queues – strict and weighted round robin queuing mechanisms
- Per VLAN, per user profile, per user, per service rate limiting
- VoIP call admission control (CAC)
- Marking and policing – WMM (802.11e) for wireless, 802.1p and/or DiffServ
- WMM Wi-Fi Alliance® certified
- WMM power save (U-APSD)
- Support for Spectralink SVP Protocol

ANTI-THEFT
- Designed to work with Kensington-style locks
- Software anti-theft via protected bootstrap
- Tamper-proof security screw

COOPERATIVE RF MANAGEMENT
- Cooperative channel selection, with DFS2 support
- Station (client) load balancing
- Cooperative transmit power level control

WIRELESS IDS & IDP
- Built-in in-network rogue AP detection
- Integration with AirTight IDS & IDP solution
- Rogue AP mitigation
- Rogue client detection including ad hoc clients
- Wireless compliance checking
- Sophisticated L2/L3 DoS protection with a wide range of L2/L3 attack signatures
- Port scan, IP spoofing, and IP address sweep protection provides added security, particularly for quarantine and guest networks
- Wide array of security actions including logging, blocking, disassociation, and banning to enable the network to automatically respond to threats

MANAGEMENT
- Central management
  - – Management via HiveManager NMS
  - – Management via HiveManager Online NMS
  - – Management via HiveUI
- Device Configuration
  - – CLI via Telnet, SSHv2, or console
- Virtual Console automatically sets up an SSID with CLI access allows configuration of new APs without the need for serial or ethernet cables
- Monitoring
  - – SNMP v1, v2c, and syslog

SERVICES
- DHCP Server and DHCP Relay

MESH
- Flexible radio configuration allows for either interface to be configured as a mesh
- Ethernet bridging support across mesh connections for a single device or workgroup
- Automatic neighbor detection and route determination
- Mesh traffic encrypted with AES
- L2 routing rather than spanning tree used for greater performance and less overhead
- Self-healing enabled by dynamic path selection

HIGH AVAILABILITY
- Full client session synchronization across HiveAPs
- Stateful failover of any HiveAP even in the event of a wire failure
- AAA caching of credentials for remote office survivability
- Mesh failover in the event of wire or switch failure
- Dynamic mesh failover automatically changes access radio to backhaul radio in the event of a wire or switch failure
- Wireless virtual access console
- Track IP or Gateway automatically initiates failover or troubleshooting tools in the event of a failure

LOCATION AND ASSET TRACKING
- Built-in client location tracking with topology and heat maps
- Partnership with AeroScout to act as a sensor
- Partnership with Ekahau for location and asset tracking
- Tracks laptops and asset tags

	HiveAP 110	HiveAP 120
Mounting	• Desktop • Wall Mount • Ceiling Tile Clips	• Desktop • Wall Mount • Ceiling Tile Clips
Physical Security	• Kensington security lock point	• Kensington security lock point
Radios	**Single Dual Band Radio (a/b/g/n)** *802.11a Radio Specifications* • 5.150– 5.850 GHz Operating Frequency • Orthogonal Frequency Division Multiplexing (OFDM) Modulation • 24 dBm Transmit Power • Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 with automatic fallback *802.11b Radio Specifications* • 2.4–2.5 GHz Operating Frequency • Direct-Sequence Spread-Spectrum (DSSS) Modulation • 20 dBm Transmit Power • Rates (Mbps): 11, 5.5, 2, 1 with automatic fallback *802.11g Radio Specifications* • 2.4–2.5 GHz Operating Frequency • Orthogonal Frequency Division Multiplexing (OFDM) Modulation • 22 dBm Transmit Power • Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 with automatic fallback *802.11n Radio Specifications* • 2.4–2.5 GHz and 5.150 GHz – 5.950 GHz Operating Frequency • 802.11n Modulation • 24 dBm Transmit Power • Rates (Mbps): MSC0 - MSC15 (6.5Mbps - 300Mbps) • 2x2 Multiple-In, Multiple-Out (MIMO) Radio • HT20 and HT40 High-Throughput (HT) Support • A-MPDU, A-MSDU Packet Aggregation	**Dual Concurrent Radios (b/g/n + a/n)** *802.11a Radio Specifications* • 5.150– 5.850 GHz Operating Frequency • Orthogonal Frequency Division Multiplexing (OFDM) Modulation • 24 dBm Transmit Power • Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 with automatic fallback *802.11b Radio Specifications* • 2.4–2.5 GHz Operating Frequency • Direct-Sequence Spread-Spectrum (DSSS) Modulation • 20 dBm Transmit Power • Rates (Mbps): 11, 5.5, 2, 1 with automatic fallback *802.11g Radio Specifications* • 2.4–2.5 GHz Operating Frequency • Orthogonal Frequency Division Multiplexing (OFDM) Modulation • 22 dBm Transmit Power • Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 with automatic fallback *802.11n Radio Specifications* • 2.4–2.5 GHz and 5.150 GHz – 5.950 GHz Operating Frequency • 802.11n Modulation • 24 dBm Transmit Power • Rates (Mbps): MSC0 - MSC15 (6.5Mbps - 300Mbps) • 2x2 Multiple-In, Multiple-Out (MIMO) Radio • HT20 and HT40 High-Throughput (HT) Support • A-MPDU, A-MSDU Packet Aggregation
Antennas	• 2x Integrated dual band 2.4-2.5 and 5.1-5.8Ghz Omni Directional antennas, 4.0 dBi gain @ 2.4Ghz, 2 dBi gain @ 5Ghz	• 2x Integrated single band, 2.4-2.5 GHz Omni-directional antennas, 4.0 dBi gain • 2x Integrated single band, 5.1-5.8 GHz Omni-directional antennas, 2.0 dBi gain
Interfaces	• Autosensing 10/100/1000 Base-T Ethernet Port • Power over Ethernet (PoE) capable (802.3af) Ethernet Port • 1x Reset Pinhole	• Autosensing 10/100/1000 Base-T Ethernet Port • Power over Ethernet (PoE) capable (802.3af) Ethernet Port • 1x Reset Pinhole
Dimensions (WxHxD)	• 6.5 in. W x 6.5 in H x 2 in D (16.51 cm W x 16.51 cm H x 5.08 cm D)	• 6.5 in. W x 6.5 in H x 2 in D (16.51 cm W x 16.51 cm H x 5.08 cm D)
Weight	• 1.75 lbs (0.8 kg)	• 1.75 lbs (0.8 kg)
Environmental	• Operating: 0 to +40°C • Storage: -40 to +85°C • Humidity: 95%	• Operating: 0 to +40°C • Storage: -40 to +85°C • Humidity: 95%
Environmental Compliance	• UL 2043 (Plenum)	• UL 2043 (Plenum)
Power Options	• 802.3af Power over Ethernet (PoE) port • 48v DC external power adapter (sold separately)	• 802.3af Power over Ethernet (PoE) port • 48v DC external power adapter (sold separately)
Power Specifications	• AC/DC power adapter: – Input:100 – 240 VAC – Output: 48V/0.3A • PoE nominal input voltages: 48 V, 0.35A (802.3af) • Typical power consumption: 7w • RJ-45 power input pins: Wires 4, 5, 7, 8 or 1, 2, 3, 6	• AC/DC power adapter: – Input:100 – 240 VAC – Output: 48V/0.3A • PoE nominal input voltages: 48 V, 0.35A (802.3af) • Typical power consumption: 8w • RJ-45 power input pins: Wires 4, 5, 7, 8 or 1, 2, 3, 6

WARRANTY AND SUPPORT INFORMATION

Warranty
Every Aerohive Networks, Inc. HiveAP is bundled with a limited lifetime hardware warranty and three months of software support. This can be augmented with the Aerohive support offering.

Paid Support
Aerohive's support offering provides what you would expect to keep your wireless network up and running. The standard support offering, purchased separately, includes next day advanced replacement, 24x7 or 8x5 technical support, web and email support access, and software updates. For complete support terms go to www.aerohive.com/support.

Technical Support
The Aerohive support contract provides unlimited access to the Aerohive support team by phone, pager, or online either 8x5 or 24x7 depending on the support contract.

Software Updates
The Aerohive support contract provides software upgrades and updates to HiveOS and HiveManager.

Next Business Day Advanced Replacement
If there is a hardware failure of a device covered by an Advanced Replacement support contract, a new unit will be sent overnight to all locations within the US and Canada assuming the issue is identified by 3:00 PM PST on Monday through Friday. Within the European Union, the issue must be identified by 3:00 PM CET. The replacement product will be received the next day unless the unit is shipped over the weekend in which case it will be delivered on Tuesday, Aerohive holidays excepted. The customer has 30 days to return the replaced unit in a prepaid box.

SKU	Description
US HiveAPs	
AH-AP-120-N-FCC	HiveAP 120, Plenum Rated, one 802.11b/g/n radio, one 802.11a/n radio, one 10/100/1000 Ethernet (PoE) port, FCC regulatory domain, without power supply
AH-AP-110-N-FCC	HiveAP 110, Plenum Rated, one 802.11a/b/g/n radio, one 10/100/1000 Ethernet (PoE) port, FCC regulatory domain, without power supply
International HiveAPs	
AH-AP-120-N-W	HiveAP 120, Plenum Rated, one 802.11b/g/n radio, one 802.11a/n radio, one 10/100/1000 Ethernet (PoE) port, configurable regulatory domain, without power supply
AH-AP-110-N-W	HiveAP 110, Plenum Rated, one 802.11a/b/g/n radio, one 10/100/1000 Ethernet (PoE) port, configurable regulatory domain, without power supply
AP Accessories	
AH-ACC-PWR-30W-US	30W Power Supply with US power cord
AH-ACC-PWR-30W-UK	30W Power Supply with UK power cord
AH-ACC-PWR-30W-EU	30W Power Supply with EU power cord
AH-ACC-INJ-30W-US	30W Indoor Rated PoE Power Injector with US power cord
AH-ACC-INJ-30W-UK	30W Indoor Rated PoE Power Injector with UK power cord
AH-ACC-INJ-30W-EU	30W Indoor Rated PoE Power Injector with EU power cord
AH-ACC-PWR-CBL-US	US Power Cord
AH-ACC-PWR-CBL-UK	UK Power Cord
AH-ACC-PWR-CBL-EU	EU Power Cord